



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.  
ATLANTA, GEORGIA 30365

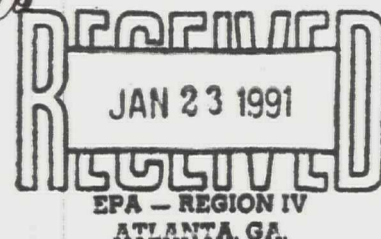
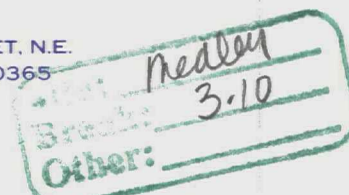
MEMORANDUM

Date: JAN 18 1991

SUBJECT: REVIEW OF THE "DRAFT REMEDIAL INVESTIGATION REPORT PHASE I & II, MEDLEY FARM SITE," GAFFNEY, SOUTH CAROLINA  
DECEMBER 1990

FROM: Tony Able, Hydrologist, P.G.  
Ground-Water Technology Unit

TO: Jon K. Bornholm  
Remedial Project Manager  
North Superfund Remedial Branch



Per your request review of the subject document has been completed. The comments that follow are referenced to specific page numbers, figures, and tables within the document.

Figure 3.5 - Upon plotting the analytical results from the ground-water samples on this figure it appears that the northern extent of the ground-water contaminant plume has not been delineated. Monitoring wells BW108, SW108, and SW3, northeast of the disposal area, show VOCs in excess of drinking water standards. At least two additional monitoring wells should be installed north of these wells, between the disposal site and the tributary stream.

Table 5.2 - This table should be modified to be consistent with the attachment to this memorandum. The attachment is Maximum Contaminant Levels (MCLs), proposed MCLs, and health based concentrations for contaminants in drinking water for the volatile organic compounds (VOCs) detected in ground water at the site (table 5.7).

Page 133 - It is stated that the VOCs detected in monitoring wells SW1, BW1, BW4, and SW106 in Phase II were inconsistent with the samples collected in Phase I. In other words high levels of VOCs were detected in these wells in the Phase II sampling event and they were not detected in the Phase I event. As a result these wells were resampled and the analytical results indicated that the VOCs were no longer present. We should make sure that this resampling is valid and that the VOCs detected were indeed analytical or quality control errors. We should see that the Environmental Services Division (ESD) has thoroughly reviewed this resampling event for validity.

Table 5.8 - The following pMCLs should be added to the drinking water standards for metals. Although pMCLs are not ARARs, as defined in SARA, at this time they will be enforceable as ARARs if they are promulgated before the Record of Decision is signed.



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Antimony	5.0 ug/l
Beryllium	1.0
Cadmium	5.0
Chromium	100.0
Lead	15.0 (superfund cleanup level)
nickel	100
Thallium	1.0

Page 136 and Table 5.8 - It should be noted that ground-water samples from the upgradient monitoring well SW1 had MCL and pMCL exceedences for antimony arsenic, beryllium, cadmium, chromium, lead, and nickel. This presents concerns that the nearby Sprouse domestic well could be contaminated with metals. Although this report makes a strong case that the metals are not associated with the Medley Farm Disposal Site, we recommend that precautions be taken to insure that neither humans or livestock are drinking contaminated water from the well. If water from the well is being consumed it should be sampled.

Table 5.8 and 5.9 - Ground-water samples from monitoring well SW4 contained beryllium above the pMCL and lead above the Superfund cleanup level, and samples from monitoring well BW2 also exceeded the pMCL for beryllium. These exceedences should be addressed in the report.

Page 155 - The statement is made that contaminant "transport through the extremely to moderately fractured bedrock appears to be much less than through the saprolite and transition Zone." Monitoring well pair BW108/SW108 contradicts this statement. These are the most distant wells from the site showing contamination, and the "fractured bedrock well" (BW108) shows VOC levels well above those in the "saprolite well" (SW108). This tends to indicate that the majority of "contaminant transport" is occurring in the fractured rock portion of the aquifer.

Page 159 Conclusions 8, 9, and 11. - Conclusion 8 states that no contaminants were detected in the background monitoring wells. This statement should be changed to indicate that no site related VOCs were detected in background monitoring wells.

Conclusion 9 should be modified to indicate that although there are high levels of metals in the background monitoring wells they do not appear to be related to the Medley Farms Disposal Area.

Conclusion 11 should be modified to state that although contaminated ground water has not reached Jones Creek it has reached monitoring wells BW108 and SW108 which are adjacent to the Jones Creek tributary immediately northwest of the site.

ATTACHMENT  
REGULATORY STANDARDS FOR DRINKING WATER  
ug/l

<u>Parameter</u>	<u>MCL</u>	<u>pMCL</u>	<u>other</u>
Acetone			700 (1)
Benzene	5.0		
Carbon tetrachloride	5.0		
Chloroform			6.0 (2)
Chloromethane			3.0 (3)
Methylene Chloride		5.0	
Tetrachloroethene		5.0	
Toluene		1000	
Trichloroethene	5.0		
1,1,2,2-Tetrachloroethane			2.0 (4)
1,1,1-Trichloroethane	200		
1,1,2-Trichloroethane		5.0	
1,1-Dichloroethene	7.0		
1,2-Dichloroethene (total)	70.0		
1,1-Dichloroethane			350 (5)
1,2-Dichloroethane	5.0		
2-Butanone (MEK)			350 (1)

Notes:

1 - Concentration calculated from the reference dose (RfD) in EPA's 4th quarter (1990) Health Assessment Summary Tables (HEAST) using 20% relative source contribution (RSC).

2 - Concentration represents a one in one million (E-6) cancer risk value.

3 - Lifetime Health Advisory value from EPA's Drinking Water Regulations and Health Advisories (November, 1990).

4 - Concentration represents a one in one hundred thousand (E-5) cancer risk value. The E-5 value is used because 1,1,2,2-tetrachloroethane is a Class C carcinogen.

5 - Concentration calculated from the RfD in EPA's HEAST using an extra 10-fold safety factor because 1,1-dichloroethane is a Class C carcinogen.

Able      Hayes

File NO. 30.440  
MEDLEY FARM SITE  
GAFFNEY, SC  
MEDRI.DOC

BENEDICT BROWN

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